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MINNESOTA BOYS' AND GIRLS' CLUBS

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University Farm, St. Paul

Bulletin No. 19

CONSERVATION PROGRAM FOR 4-H CLUBS

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A SHELTERBELT LIKE THIS PROTECTS THE HOME
AND FURNISHES COVER FOR BIRDS AND
OTHER WILD LIFE

UNIVERSITY OF MINNESOTA AGRICULTURAL EXTENSION DIVISION

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CONSERVATION PROGRAM FOR 4-H CLUBS

The purpose in providing a conservation program for 4-H clubs and club members is to broaden the interests of 4-H boys and girls in the natural resources around them; to stimulate their love for trees, flowers, useful birds and animals, and the life of rivers and lakes, and to help them to a fuller appreciation of such things in the making of happy rural homes.

The program outlines activities in four main fields. These are:

Forestry	Waterfowl and game
Upland game	Fish

Under each of these headings, three objectives are emphasized:

Appreciation, or the development of an understanding of the values of the four resources named, in the social and economic life of the people.

Restoration, or a recognition of the individual's obligation to aid in bringing our natural resources back to their normal levels, wherever they have been depleted.

Protection, or the need of doing what we can to maintain at a proper level our present or restored resources.

Members or groups may develop their own projects from among the activities suggested, with the aid of their leaders.

FORESTRY

Forestry has a prominent place in any conservation program. The following are suggestions for activities in the field of forestry:

To Develop Appreciation

As steps toward an appreciation and understanding of the values of our outdoor, natural resources, 4-H clubs and club members may undertake to do any one or several of the following things:

1. Learn to know how trees grow.
2. Learn to know the trees about them, by identifying at least 24 trees native to Minnesota; or 10 trees, if one lives in a prairie region.
3. Collect twigs, leaves, needles from conifers or evergreens, fruits and seeds, of forest trees. Identify, mount and label them, using a display card 8½ by 11 inches for each species. List the principal uses of each tree in the industries.
4. Study the value of trees in aiding the control of soil erosion, in furnishing game cover and feeds, and in beautifying picnic and recreational grounds.
5. Study forestry practices. Make plans for proper management and cutting, to improve timber-growing conditions.
6. Learn the woods best suited for the manufacture of the following: Plow handles, wagon tongues, wagon reaches, whippetrees, spokes, ax handles, fuel wood, fence posts, and other farm and home equipment.

7. Encourage tree-planting for school-yard protection and beautification, as an aid to bird life, to starting school forests, and to starting community forests.

8. Take care of five ornamental or shade trees, providing for weed control, watering, and protection against fire and rodents.

9. Plant not less than 12 trees for home beautification or farm improvement.

10. Plant trees and shrubs, such as pinchberry, choke-cherry, June berry, wild plum, hawthorne, high bush cranberry, dogwood, wild rose, and mountain ash, to provide nesting areas and food for game and song birds.

11. Raise trees from seed or cuttings for home requirements, 4-H home nursery projects. Plant willow cuttings. Transplant native trees and shrubs.

To Aid in Restoration

There is much land in Minnesota unsuited to food crops, which should be used for the growth of needed timber crops. Four-H club members may do one or more of the following things:

1. Improve existing timber tracts by cutting and thinning, by prevention of grazing in woodlot areas, and by better utilization of cut timber.

2. Plant trees, shrubs, vines, and grasses.

3. Plant a woodlot of one-half acre or more on waste or unused land. Grow trees that are useful and tall, straight, clean, and free from disease.

4. Plant trees for erosion control on stream and river banks, in gullies, and on hillsides.

5. Plant a good windbreak or shelterbelt.

6. Help establish local parks and picnic grounds.

To Aid in Protection

To bring back our forest resources, fires must be prevented, devastation must be halted, and proper trees must be given a chance to grow. Properly protected, good timber becomes a savings bank to fall back upon in times of economic necessity. Four-H club members may help in any of the following ways:

1. Construct fire lines around woodlands.

2. Learn to fight fires. Know what tools to use.

3. Report fires to forest rangers, either state or federal, and lend all possible aid.

4. Get a "burning permit" from your local fire warden or forest ranger before doing any burning.

5. When cutting trees, "slash" and other debris should be carefully and properly disposed of during safe seasons of the year.

6. Learn proper methods of cutting forest and woodland crops, to assure greatest future benefit to remaining stand and future crop.

7. Utilize cut products carefully to prevent waste.

8. Protect wild flowers. Learn to pick them so as not to harm growing plants.

9. Help "post" and maintain fire prevention signs.

UPLAND GAME

It is common knowledge that upland game is not so plentiful as it once was. Four-H club members may do much to remedy this situation.

To Develop Appreciation

Members of 4-H clubs should learn more about wild game life—

1. Learn to identify native and common upland game birds and animals; know their breeding and feeding habits and requirements.
2. Learn to identify 20 varieties of songbirds helpful in the control of insects; study their life.
3. Learn to know six varieties of upland game birds.
4. Make a game-bird calendar. Keep a record of spring arrivals, mating periods, laying, hatching, migration, etc.
5. Study and report on game conditions in their territory; when and where game increases on their farms; where it decreases.
6. Encourage the growth of natural bird food in and around the farmstead. Provide and protect natural bird foods, growing along fence rows and in corners not needed for crop production.
7. Erect suitable bird-houses and bird-baths.
8. Learn the etiquette of the out-of-doors.
 - a. Respect the outdoors. Keep camp and picnic grounds clean. Prevent birch-bark vandalism and the picking of wild flowers.
 - b. Prevent water pollution.
 - c. Protect wild life from destruction and vandalism.
 - d. Be a careful camper.

To Aid in Restoration

Game birds are prolific. Their requirements, tho definite and unchangeable, are few and easily provided. Trees and forest growth provide food, cover, protection and breeding places. Four-H club members can aid in making their immediate vicinities a natural home for the species living there.

1. Make a game survey, take a game census, and draw a map of your farm.
2. Leave trees, brush, and shrubs along fence rows and unused fence corners, to serve as shelter, cover, nesting and feeding areas for game.
3. Help propagation by salvaging and hatching eggs from abandoned nests.
4. Provide watering places during dry periods.
5. Make natural food available for feeding throughout the year. Establish feeding stations.
6. Provide winter feeding grounds. Make lean-to's by means of brush, cornstalks, etc. Locate feeding stations not more than 50 yards from cover. A barrel box or hopper will insure maximum efficiency and minimum waste, with little attention required. Provide grit in the form of sand or gravel.

7. Keep within game bag limits when hunting. Retrieve wounded birds. Leave breeding stock for next year's increase.

To Aid in Protection

Nature, in balancing her game budget, makes no provision for the taking of game by man. This is a problem which must be met by education and co-operation. Four-H club members may do any or all of the following things:

1. Fence off nesting and breeding areas to prevent over-grazing and trampling by livestock.
2. Protect nesting and feeding areas from fire.
3. Prevent the destruction of eggs or the disturbing of female birds during the nesting season, particularly during hay-cutting operations. By using "flushing bars" or by marking nests with sticks to which flags are tied, the nests may be saved.

WATERFOWL AND GAME

The problems of water fowl and game are similar, in the main, to those of upland game. Knowledge of the life habits and requirements of the common species will facilitate restoration and protection.

To Develop Appreciation

Four-H club members may do the following things to develop an appreciation of water fowl and game:

1. Study 12 varieties of water birds.
2. Learn to know animals that are harmful to water fowl, and that fit into the normal game cycles.
3. Learn and observe the game laws. Co-operate with individuals and organizations interested in the protection and restoration of game.
4. Stimulate interest in maintaining and controlling water levels.

To Aid in Restoration

The encroachment of agriculture and drainage projects on sloughs, swamps, waterholes, and small lakes, which have been unnecessarily dried out, has destroyed the feeding and breeding grounds of waterfowl. To remedy this, 4-H club members may:

1. Impound water during spring freshets and spring thaws, to meet seasonal needs. Create catch basins to hold seasonal rains.
2. Maintain proper water levels, to provide better breeding and feeding areas.
3. "Slow up" fast drainage to retard "run-off" and check seepage.
4. Discourage unwise drainage and encourage better sanitation.
5. Plant and encourage the growth of marsh and water plants, for waterfowl are principally vegetarians.
6. Encourage nesting sites.

To Aid Protection

Protection of nesting and feeding areas, plus the maintenance of depleted water resources, will result in a substantial increase of waterfowl. Four-H club members may do much to help.

1. Prevent the drying of sloughs or ponds serving as breeding and feeding areas.
2. Help maintain a normal water level.
3. Protect water food-plants from grazing animals and fire.
4. Give full protection during nesting season. Aid propagation by hatching abandoned eggs artificially.
5. Respect "haited" ground.
6. Obey game laws.

FISH

Game fish are good housewives. They need ample nesting areas, clean water, and no dirt.

To Develop Appreciation

Four-H club members should become familiar with the life cycle of important species of fish in their localities. To increase their knowledge, and, as a result, their appreciation, they may do the following:

1. Learn to identify important game fish and rough fish native locally.
2. Learn, and keep, fish regulations and special laws.
3. Study methods of encouraging the natural growth of desirable fish foods.
4. Learn to improve streams. Build practical dams that will provide deep pools in which natural food will grow. Plant trees for shade and food, along banks of water areas.
5. Arouse public opinion against polluted streams which handicap fish life.

To Aid in Restoration

Every fisherman can improve local streams. He should remember that water alone does not make a good breeding place for fish. Four-H club members may aid restoration greatly by doing the following things:

1. Maintain adequate water levels to meet seasonal demands, and to encourage fish development and sanitation. Retard run-off.
2. Provide shelter by sinking an occasional log, tree, or brush pile.
3. Encourage restocking in order to conserve desirable species. Apply to the State Fish and Game Department for young fish to increase the supply. Do not introduce undesirable species.
4. Build or set aside nursery ponds for game fish. Set aside natural breeding areas where no fishing may be done.
5. Improve existing streams.
6. Rescue game fish from shallow water areas which are likely to freeze solid during winter, or to dry out during summer. Transplant such fish to more suitable water areas.
7. Don't waste the fish you catch. Don't attempt to catch the limit every time you fish.

To Aid Protection

Wise protection of fish will greatly increase their numbers. Four-H club members may help in the following ways:

1. By maintaining proper water levels.
2. By preventing fires along banks and streams. The loss of shade affects water temperature, and wood ashes pollute streams.
3. By discouraging unwise and unregulated drainage.
4. By removing rough fish from game fish waters.
5. By observing fish laws. Report violations to proper authorities.

FOUR-H CONSERVATION CHECK-UP

As a basis for future, or continued, 4-H club conservation work, the following issues must be taken into consideration:

1. What can our club do to aid in conservation?
2. What can our club do to contribute to the needs of game, forests, water, and recreational establishments?
3. What seems to be the major problem in our immediate territory?
4. Are we getting co-operation from wild-life and service organizations in our community?
5. Are we co-operating to the fullest extent with such groups in our community?
6. Are we improving our conservation education by—
 - Establishing a library of pamphlets and bulletins?
 - Subscribing to magazines?
 - Attending lectures?
 - Sponsoring meetings?
 - Putting up exhibits, displays, etc.?
 - Giving demonstrations?
7. Are we taking an active part in the upbuilding of waste areas?
8. Are we co-operating with all organizations working for greater appreciation of Minnesota's resources?
9. Are we upholding the ideals expressed in our 4-H club pledge, "I pledge my head to clear thinking, my heart to pure loyalty, my hands to larger service, and my health to better living, for my club, my community, my home and my country?"
10. Are we making calendars—a nature calendar recording bird migrations, spring and summer appearances and activities; a tree calendar showing species, spring and summer development, leaf and fruit growth, seed development and fall preparation; or any other calendar, recording important changes in fish life, upland game, waterfowl, fur animals, large game animals, wild shrubs, or wild flowers?

HELPFUL BULLETINS

Four-H clubs and 4-H club members should collect helpful bulletins. Clubs should build up libraries of such bulletins, and appoint a librarian to take charge. Club members should be on the lookout for bulletins other than those listed below.



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State Forest Service, State Office Building, St. Paul, Minn.

Forests and Forestry Thru the Camera
Our Minnesota Forests
Forestry in Minnesota
Forest Laws

Game and Fish Department, State Office Building, St. Paul, Minn.

Game and Fish Laws

American Tree Association, 1214 Sixteenth Street N.W., Washington, D.C.

The Forestry Primer

More Game Birds in America Foundation, 500 Fifth Avenue, New York, N. Y.

Game Birds—How to Make Them Pay on Your Farm
Small Refuges for Waterfowl
Waterfowl Food Plants

University Department of Agriculture, University Farm, St. Paul, Minn.

Special Bulletin 150, Wood as Fuel
F-9, Planting Cuttings
F-5, Planting the Standard Windbreak
F-13, How to Plant a Forest Seedling
F-15, 4-H Black Walnut Project
F-10, Our Native Conifers
F-8, Nursery Transplant Project
F-4, Our Friends, the Trees, in Winter

The following U. S. Department of Agriculture bulletins may be obtained from your county agent or by writing your congressman or senator, Washington, D. C.

Circular 98, The Forest Handbook for Teaching
Department Bulletin 863, Forestry Lessons in Home Woodlands
Farmers Bulletin 1591, Transplanting Trees and Shrubs
Farmers Bulletin 1567, Propagation of Trees and Shrubs
Farmers Bulletin 338, Care and Ornamentation of the Roadside
Farmers Bulletin 1209, Planting and Care of Street Trees
Department Bulletin 1497, Forest Planting in the Lake States
Farmers Bulletin 1603, Shelterbelts on the Northern Great Plains
Farmers Bulletin 1405, Windbreak as a Farm Asset
Farmers Bulletin 1177, Improvements to Farm Woods
Farmers Bulletin 1453, Growing Coniferous Trees
Farmers Bulletin 1123, Growing Hardwood Seedlings
Farmers Bulletin 1501, Nut-tree Propagation
Leaflet 30, Cutting the Farm Woods
Farmers Bulletin 1169, Deciduous Shade Tree Insects
Farmers Bulletin 1234, Gullies—How to Control and Reclaim Them
Leaflet 8, Mink Raising
Leaflet 27, Fur Farming for Beginners
Farmers Bulletin 869, The Muskrat as a Fur Bearer
Farmers Bulletin 630, Common Useful Birds to Farmers
Farmers Bulletin 1613, Propagation of Upland Game Birds
Farmers Bulletin 1612, Propagation of Aquatic Game Birds
Farmers Bulletin 205, Eleven Important Wild Duck Foods
Farmers Bulletin 702, Cottontail Rabbits—Their Relation to Trees and Farm Crops

Department of Commerce, Bureau of Fisheries, Washington, D.C.

Document 946, Aquatic Plants in Pond Culture
Document 1056, Propagation of Pond Fishes
Economic Circ. 41, Culture of Rainbow Trout and Brook Trout in Ponds

Peter Cartridge Company, Kings Mills, Ohio.

Bulletin, How to Raise Game for Profit

Department of Conservation, Lansing, Michigan.

Bulletin, H. M. Wight, Suggestions for Pheasant Management in Southern Michigan